



Docket No. 8733.378.00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re application of

Myoung-Su YANG

Group Art Unit: **TBA**

Serial No.: **09/748,871**

Examiner: **TBA**

Filed: **December 28, 2000**

For: **Method of Forming a Polycrystalline Silicon Layer**

PRELIMINARY AMENDMENT

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

Prior to issuance of a first Office Action, please amend the above-referenced application as follows:

IN THE SPECIFICATION:

Applicants hereby respectfully submit a Substitute Specification, along with a CompareRite document showing all of the deletions and additions.

IN THE DRAWINGS:

A proposed drawing change accompanies this Preliminary Amendment. That proposed drawing change deletes the heading for Fig. 1B, and amends the title of Fig. 1C to Fig. 1B. These proposed changes are aimed at clarifying the drawings.

IN THE CLAIMS:

Please **ADD** new Claims 7-17 as follows:

- 7. A method of forming a polycrystalline silicon layer, comprising:
forming an amorphous silicon layer on a substrate;

melting said amorphous silicon layer using a laser beam so as to form a polycrystalline silicon layer; and

re-melting an upper portion of said polycrystalline silicon layer using a laser beam so as to re-crystallize said upper portion.

8. The method of forming a polycrystalline silicon layer according to claim 7, wherein said re-melting is performed by passing said laser beam through a mask having a low transparency region.

9. The method of forming a polycrystalline silicon layer according to claim 8, wherein said low transparency region includes a stripe shape.

10. The method of forming a polycrystalline silicon layer according to claim 7, wherein said mask further includes a high transparency region.

11. The method of claim 7, further including moving the substrate relative to a laser beam.

12. The method of claim 7, further including dehydrogenating said amorphous silicon layer before melting.

13. A laser-based crystallization apparatus, comprising:
a laser beam;

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a mask receiving said laser beam, said mask including a high transparency region for passing said laser beam with little attenuation, and a low transparency region for attenuating said laser beam;

a projection lens for receiving said laser beam from said mask, said projection lens for focusing said laser beam onto a substrate.

14. A laser-based crystallization apparatus according to claim 13, wherein said low transparency region has a stripe shape.

15. A laser-based crystallization apparatus according to claim 13, wherein said high transparency region has a stripe shape.

16. A laser-based crystallization apparatus according to claim 13, wherein said substrate moves relative to said laser beam.

17. A laser-based crystallization apparatus according to claim 13, wherein said laser beam is an excimer laser beam.--

REMARKS

Applicants respectfully request entry of the attached Substitute Specification, new claims, and a drawing change. Applicants have attached clean pages of the claims. On full faith and belief, the undersigned attests that no new matter has been added to the Substitute

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Specification. If there are any questions or matters to be discussed, the Examiner is invited to contact the undersigned.

Any fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

Respectfully submitted,

LONG, ALDRIDGE & NORMAN

By: John M. Kelly
John M. Kelly
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Date: February 22, 2001
70869.1



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PROPOSED DRAWING CORRECTION

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

Applicants submit a proposed drawing correction as shown in red in the appended informal drawing. The following changes are indicated:

On the first page of the drawings, delete "Fig. 1B (Related Art)."

On the first page of the drawings, change "1C" to --1B--.

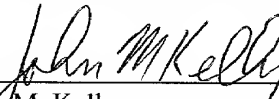
REMARKS

No new matter has been added. Favorable consideration is sought therefore.

Applicants' undersigned attorney may be reached in our Washington office by telephone at (202) 624-1200. All correspondence should be directed to the below-listed address.

Applicants hereby authorize the Commissioner of Patents to charge any fees necessary to complete this filing, including any fees required under 37 C.F.R. §1.136 for any necessary Extension of Time to make the filing of the attached documents timely, or credit any overpayment in fees, to Deposit Account No. 50-0911. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. §1.136 for the necessary extension of time. A copy of this sheet is enclosed.

Respectfully submitted,
LONG, ALDRIDGE & NORMAN

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72237.1

Fig.1A
(Related Art)

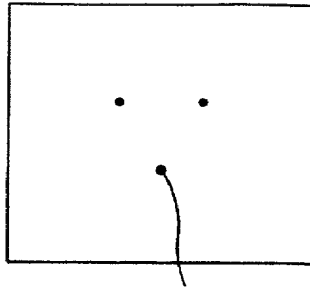
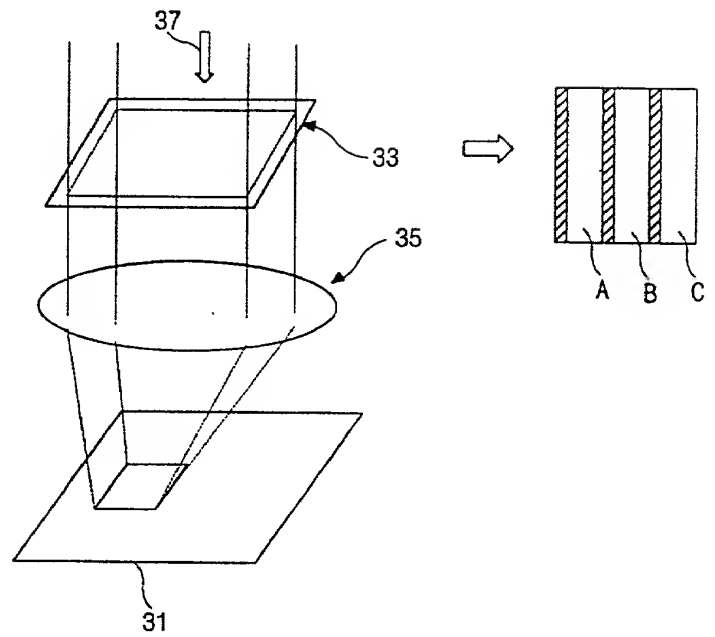


Fig.2
(Related Art)



~~Fig. 1B~~
(Related Art)

Fig. 1B
(Related Art)

